

MONTHLY PROGRESS REPORT

ORONOGO-DUENWEG MINING BELT SITE - PHASE 10 JASPER COUNTY, MO

CONTRACT NO: EP-S7-15-06

Prepared for

U.S. Environmental Protection Agency – Region 7
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1.0 INTRODUCTION

EQM Inc. (EQM), under Contract No. EP-S7-15-06, with the United States Environmental Protection Agency (USEPA) prepares this Monthly Progress Report (MPR) to summarize work completed by EQM under Operable Unit 1 of the Oronogo-Duenweg Mining Belt Site - Phase 10 in Jasper County, MO.

EQM was contracted by USEPA to perform the general requirements, erosion control, clearing and grubbing, material removal, seeding and fertilizing on the Phase 10 sites.

This report is organized into sections that present the project schedule and summarize the work activities performed during the reporting period, problems encountered, proposed solutions, corrective actions taken, outstanding issues, changes to organization or method of operation, project costs, submittals, and work planned for the next reporting period.

2.0 PROJECT SCHEDULE STATUS

Area	Clearing & Grubbing	Waste Removal	Clay Cap	Drainage	Topsoil	Final Grading	Seeding	Fencing	Original LOD (Ac)	Final LOD (Ac)
Base Area 1	100%	100%	100%	100%	n/a	100%	100%	100%	38.6	38.8
Base Area 2	100%	100%	100%	100%	n/a	100%	100%	100%	5.6	5.2
Base Area 3	100%	100%	100%	100%	n/a	100%	100%	100%	7.9	4.7
Base Area 4	100%	100%	100%	100%	n/a	100%	100%	100%	9.1	8.8
Base Area 6	100%	100%	100%	100%	n/a	100%	100%	n/a	14.5	12.1
Base Area 8	100%	100%	100%	100%	n/a	100%	100%	100%	27.7	22.9
Base Area 11	100%	100%	n/a	100%	100%	100%	100%	100%	6	4.6
Base Area 13	100%	100%	100%	100%	n/a	100%	100%	100%	13.2	9.3
Base Area 14	100%	100%	100%	100%	n/a	100%	100%	n/a	3.9	3.1
Base Area 15	100%	100%	100%	100%	n/a	100%	100%	100%	30.8	11.8
Cen. City Frwrks. Repos.	100%	n/a	100%	100%	100%	100%	100%	n/a	0	1.9
Opt. 1 Area 1	100%	100%	100%	100%	n/a	100%	100%	100%	35.4	30.1
Opt. 1 Area 2	100%	100%	100%	100%	n/a	100%	100%	100%	19	14.7
Opt. 1 Area 3	100%	100%	100%	100%	n/a	100%	100%	100%	21.4	19
Opt. 1 Area 6	100%	100%	100%	100%	100%	100%	100%	100%	14.7	15.2
Opt. 1 Area 9	100%	100%	100%	100%	n/a	100%	100%	100%	4.6	5.2
Opt. 1 Area 15	100%	100%	100%	100%	n/a	100%	100%	n/a	1.9	2
Opt. 1 Area 20	100%	100%	100%	100%	n/a	100%	100%	n/a	3.6	7.8
Balestrin Repository	100%	n/a	100%	100%	100%	100%	100%	n/a	0	3.1
Opt. 2 Area 1	100%	100%	100%	100%	n/a	100%	0%	0%	61.64	42.83
Opt. 2 Area 3	100%	100%	100%	100%	n/a	100%	100%	100%	17.8	29.4
Opt. 2 Area 5	100%	100%	100%	100%	n/a	100%	100%	n/a	8.4	7
Opt. 2 Area 6 - South	100%	100%	100%	100%	n/a	100%	100%	100%	146.9	94.1
Opt. 2 Area 6 - North	100%	95%	10%	0%	0%	0%	0%	0%	146.9 25.4	16.7
Opt. 2 Area 6 - West	100%	100%	100%	100%	n/a	95%	50%	0%		
Opt. 2 Area 7	100%	100%	100%	100%	n/a	100%	100%	100%		24.3
Opt. 2 Area 8	100%	100%	100%	100%	100%	100%	100%	100%	12.8	36.7
Opt. 2 Area 9	100%	100%	n/a	100%	100%	100%	100%	n/a	n/a	2.4
Gypstack Modification	73% complete								N/A	

Area	Clearing & Grubbing	Waste Removal	Clay Cap	Drainage	Topsoil	Final Grading	Seeding	Fencing	Original LOD (Ac)	Final LOD (Ac)
MW-09	100%	100%	100%	100%	100%	100%	100%	100%	90.2	34.15
MW-14-01_02	100%	100%	98%	95%	n/a	65%	50%	100%	44.61	26.99
MW-18-01	100%	100%	100%	90%	100%	50%	0%	100%	56.96	
MW-19-01_02	90%	40%	0%	0%	0%	0%	0%	0%	23.04	
MW-19-03	100%	100%	100%	100%	n/a	90%	0%	0%	2	
MW-26-01	100%	100%	100%	100%	n/a	100%	50%	100%	37.10	27.67
MW-26-04	100%	100%	100%	100%	n/a	95%	50%	0%	2.14	2.10
MW-26-05	100%	100%	100%	100%	100%	80%	50%	0%	8.97	10.39

3.0 SUMMARY OF WORK ACTIVITIES PERFORMED THIS PERIOD

Mine Waste Remediation – Phase 10 (Option 2)								Monthly Totals																	
CLIN	Description	Quantity	Unit	Quantity to Date	Percent Complete	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan, 2018	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
2001	Erosion Control																								
2001AA	Sediment Fence	570	LF	570.0	100.0%						330.00							240							
2001AB	Rip Rap	915	Ton	915.0	100.0%			105.16	189.18	87.55	132.89							28.72	371.48						
2001AD	Stabilized Construction Entrance	6	Ea	6.0	100.0%		1.00	2.00			2.00				1										
2002	Clearing and Grubbing	160	Acre	116.3	72.5%							12.38			103.88									44.04	
2003	Earthwork																								
2003AA	Excavation/Disposal of Contaminated Waste	982,381	CY	982,379.0	100.0%																				
						43,533	51,692	102,023	96,506	86,979	92,806	99,045	82,753	62,577	48,231	83,855	80,185	32,787	19,407						
2003AB	Placement of material for Drainage	96,721	CY	96,474.0	99.7%		1,952	11,637	4,672	3,447		1,992	5,778	8,864		42,914	400	6,736	7,792		290	247			
2003AC	Grade Excavated Areas to final grade	160	Acre	116.3	72.5%							12.38			103.88									44.04	
2003AD	Import/Place Clay for all Repository Caps	48,810	CY	48,810.0	100.0%							1,898	8,102	20,438			3,408	5,812	8,604	548					
2003AE	Import/Place Topsoil for all Repository Caps	5,000	CY	5,000.0	100.0%														4,482	518					
2004	Seeding/Fertilizing																								
2004AA	Seeding/Fertilizing Repositories	1	Acre	1.3	98.5%				1.28																
2004AB	Seeding/Fertilizing (Fescue)	92	Acre	92.1	100.0%			13.81	2.39						75.9										
2005	Remove/Replace Fencing	5,370	LF	0.0	0.0%																			5370	
2006	Supply/Install 24" CMP Pipe	164	lf	164.0	100.0%							60.00			60				44						
2007	Supply/Install 36" CMP Pipe	55	lf	55.0	100.0%														55						

Mine Waste Remediation – Phase 10 (Option 3)																									
CLIN	Description	Quantity	Unit	Quantity to Date	Percent Completed	Apr 2018	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan, 2019	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov
3001	Erosion Control																								
3001 AA	Sediment Fence	6,000	LF	2,150	36%	465							740	945		0	0	0	0	0					
3001 AB	Rip Rap	2,500	Ton	2,461	98%	71		15				1,527	63					157	15	33		161	391	28	0
3001 AC	Stabilized Construction Entrance	6	Ea	4	67%	1	1		1		1									0					
3002	Clearing and Grubbing	300	Acre	239	80%						26			77						56				79	0
3003	Earthwork																								
3003 AA	Excavation/Disposal of Contaminated Waste	792,184	CY	794,100	100%	8,997	49,050	79,812	68,922	57,501	92,911	64,500	72,648	159,384	29,538	29,970	30,539	33,921	16,407	0					
3003 AB	Placement of material for Drainage	100,000	CY	131,700	132%				4,352		33,549	22,715		38,379	384	5,563	13,969	2,659	0	10,130					
3003 AC	Grade Excavated Areas to final grade	300	Acre	239	80%						26			77						56				79	0
3003 AD	Import/Place Clay for all Repository Caps	26,000	CY	41,143	158%		1,156		4,894		504	4,032	4,368		11,100	4,974	8,914	1,201	0	0					
3003 AE	Import/Place Topsoil for all Repository Caps	15,000	CY	8,067	54%		1,324				2,734		1,686	2,323											
3004	Seeding/Fertilizing																								
3004 AA	Seeding/Fertilizing Repositories	10	Acre	0	0%																				
3004 AB	Seeding/Fertilizing (Fescue)	290	Acre	166	57%			166																	
3005	Remove/Replace Fencing	10,000	LF	10,021	100%			1,070	3,485	1,505	31		2,815	1,115											

Mine Waste Remediation – Phase 10 (Option 3)																										
CLIN	Description	Quantity	Unit	Quantity to Date	Percent Completed	Apr 2018	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan, 2019	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	
3007	Supply/Install 36" CMP Pipe	100	If	5	5%	5																				
3010	Rip Rap, 12"-36"	2,200	Ton	681	31%	112	88							481												
3011	Crushed Rock, 3" Clean	600	Ton	570	95%	87	27	28	56				83	196	81	0		13	0	0			0	0	0	
3012	Gravel, 1"-3" Crushed w/fines	1,400	Ton	5,407	386%	200								788	14	0		2,577	1,278	43		117	122	129	139	
3013	Powerline Relocation	1	LS	1	100%							1														
3014	Tire Disposal	40	Ton	45	112%					13				31												
3015	Powerline Relocation at Carl Junction	1	LS	1	100%																1					
3016	Demolition/Debris Disposal of R. Porter's Prop	1	LS	1	100%																1	0	0	0	0	

Mine Waste Remediation – Phase 10 (Option 4)															
CLIN	Description	Quantity	Unit	Quantity to Date	Percent Completed	Apr, 2019	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan, 2020
4001	Erosion Control														
4001AA	Sediment Fence	5,000.00	LF	2,716.0	54.3%				2,716						
4001AB	Rip Rap	2,000.00	Ton	0.0	0.0%										
4001AC	Stabilized Construction Entrance	4.00	Ea	4.0	100.0%	1		1		1	1				
4002	Clearing and Grubbing	200.00	Acre	0.0	0.0%										
4003	Earthwork														
4003AA	Excavation/Disposal of Contaminated Waste	500,000.00	CY	422,026.0	84.4%			44,430	62,019	54,783	80,298	114,608	21,510	8,667	35,711
4003AB	Placement of material for Drainage	100,000.00	CY	63,766.0	63.8%			36,365	360	2,748	2,958	17,200	264	3,871	-
4003AC	Grade Excavated Areas to final grade	300.00	Acre	0.0	0.0%										
4003AD	Import/Place Clay for all Repository Caps	120,000.00	CY	56,973.0	47.5%	4,839		619	3,682	6,146	7,573	5,400	6,882	20,760	1,072
4003AE	Import/Place Topsoil for all Repository Caps	60,000.00	CY	4,547.0	7.6%					36		2,271	-	1,884	356
3004	Seeding/Fertilizing														
4004AA	Seeding/Fertilizing Repositories	70.00	Acre	0.0	0.0%										
4004AB	Seeding/Fertilizing (Fescue)	200.00	Acre	167.1	83.5%				46				122		-
4005	Remove/Replace Fencing	10,000.00	LF	12,025.0	120.3%				3,476			3,469	1,948		3,132

4006	Supply/Install 24" CMP Pipe	200.00	lf	40.0	20.0%						40				
4007	Supply/Install 36" CMP Pipe	100.00	lf	0.0	0.0%										
4010	Rip Rap, 12"-36"	200.00	ton	1,770.2	885.1%	680	475	85			123	138	14		257
4011	Crushed Rock, 3" Clean	200.00	ton	1,025.2	512.6%	112	296	32		418	168				
4012	Gravel, 1-3" Crushed w/fines	200.00	ton	177.8	88.9%										178
4013	Tire Disposal	40.00	ton	0.0	0.0%										
4014	Phone Line Relocation	1.00	EA	0.0	0.0%										

4.0 PROBLEMS ENCOUNTERED / RFI's SUBMITTED

- No RFIs were submitted this reporting period. See RFI Log Attachment A

5.0 PROPOSED SOLUTIONS

- Nothing at this time.

6.0 CORRECTIVE ACTIONS

- Nothing at this time.

7.0 OUTSTANDING ISSUES

- EQM submitted supporting documentation for the Option Period 3 Incentive 1 – Commitment to the Local Community. USEPA provided review comments on 30 Dec and EQM is currently addressing the review comments and will re-submit the supporting documentation for our claim.

8.0 CHANGES TO ORGANIZATION OR METHOD OF OPERATION

- None.

9.0 MEETINGS AND CALLS

- USEPA Representatives, Steve Kemp and Todd Campbell, periodically visited the sited and contacted EQM's superintendent to check status of the work in progress.

10.0 SUBMITTALS

- A review of current planning documents identified a need for revision/updates. EQM submitted a final revision of the SAP, which includes the FSP & QAPP, via e-mail on 22 Feb 2018 in PDF format. EQM received review comments from USEPA on 10 Oct 2018 for the FSP & QAPP and submitted a revised document to USEPA on 15 Jan 2019. On Feb 4, 2019, EQM provided USEPA with a revised signature page including a signature block for the COR, Steve Kemp.

11.0 PROJECT COSTS

The following project costs are estimated for this reporting period:

Base Contract Value	\$3,685,978.44		
Prior Period Cumulative Costs	\$3,685,978.44	Prior Period Cumulative % Complete	100%
Current Period Costs	\$0.00	Current Period % Complete+	0.0%
Current Cumulative Costs	\$3,685,978.44	Current Cumulative % Complete	100%

Option 1 Contract Value	\$5,977,289.12		
Prior Period Cumulative Costs	\$5,973,773.30	Prior Period Cumulative % Complete	99.9
Current Period Costs	\$0.00	Current Period % Complete	0%
Current Cumulative Costs	\$5,973,773.30	Current Cumulative % Complete	99.9%

Option 2 Contract Value	\$7,767,990.34		
Prior Period Cumulative Costs	\$7,720,026.80	Prior Period Cumulative % Complete	99.4%
Current Period Costs	\$47,978.76	Current Period % Complete	0.6%
Current Cumulative Costs	\$7,767,990.34	Current Cumulative % Complete	100%

Option 3 Contract Value	\$7,114,696.44		
Prior Period Cumulative Costs	\$6,945,601.61	Prior Period Cumulative % Complete	97.6%
Current Period Costs	\$0.00	Current Period % Complete	0.0%
Current Cumulative Costs	\$6,945,601.61	Current Cumulative % Complete	97.6%

Option 4 Contract Value	\$8,706,018.98		
Prior Period Cumulative Costs	\$4,888,366.81	Prior Period Cumulative % Complete	56.1%
Current Period Costs	\$302,677.15	Current Period % Complete	3.5%
Current Cumulative Costs	\$5,191,043.96	Current Cumulative % Complete	59.6%

12.0 WEATHER

EQM experienced delays associated with several rain-outs, wet field conditions and/or community events:

Week 1: 1-1 to 1-5

Wednesday 1st – Shutdown (Holiday)

Week 2: 1-6 to 1-12

Friday 10th – Early shutdown @ 12:00pm (Rain)

Saturday 11th – Shutdown (Rain)

Sunday 12th – Shutdown (Rain)

Week 3: 1-13 to 1-19

Monday 13th – Early shutdown @ 12:00pm (Rain)

Friday 17th – Shutdown (Rain)

Saturday 18th – Shutdown (Rain)

Sunday 19th – Shutdown (Rain)

Week 4: 1-20 to 1-26

Monday 20th – Shutdown (Too wet from rain)

Tuesday 21st – Shutdown (Rain)

Wednesday 22nd – Shutdown (Rain)

Thursday 23rd – Shutdown (Rain)

Friday 24th – Shutdown (Rain/Snow)

Saturday 25th – Shutdown (Too wet from rain & snow)

Sunday 26th – Shutdown (Too wet from rain & snow)

Week 5: 1-27 to 1-31

Wednesday 29th – No Gypstack (Too wet from overnight rain)

13.0 30-DAY LOOK AHEAD

Work scheduled for February includes the following:

- Gypstack Repository: Complete storm water improvements at the per the contract modification with continual maintenance as needed;
- Gypstack Repository: Continue moving slope material to meet Black and Veatch designs;
- Gypstack Repository: Continue adding material to West bench to raise elevation to promote drainage away from area (Per Steve Kemp, EPA);
- Porter Trailer: Move remaining trailers not to be demolished and continue removal of waste;
- Area 2-6 Snowball Repository: Continue waste removal on N swale as well as remove waste from ditch on Schifferdecker Ave. in prep for Capping;
- Area 2-6 North Powerline/Rail bed: Burn remaining brush, place clay cap along the power line and drainage area north of Pump Lane (Waiting on Electric Poles to be moved to remove remaining waste);
- MW 19-01_02: Continuation of removal of waste

ATTACHMENT A
REQUEST FOR INFORMATION (RFI) REGISTRY

**ORONOGO-DUENWEG MINING BELT SITE – Phase 10
REQUEST FOR INFORMATION REGISTRY**

RFI #	Item Description	Date Sub Submitted To EQM	Date EQM Submitted To USEPA CO	Date CO Returned Response To EQM	Action Taken

ATTACHMENT B
SUBMITTAL REGISTRY

**ORONOGO-DUENWEG MINING BELT SITE Phase 10
SUBMITTAL REGISTRY**

Section Number	Section Title	Submittal #	Item Type	Date Sub Submitted To EQM	Date EQM Submitted To USEPA CO	Date CO Return Submittal To EQM	Approved/ Disapproved
5	Deliverables	1	Sampling and Analysis Plan	NA	11/18/15	11/2015	Approved via email
			Sampling and Analysis Plan, Rev 1	NA	2/22/18	10/10/18	Pending; see section 10
5	Deliverables	2	Chemical Quality Control Plan	NA	11/18/15	11/2015	Approved via email
5	Deliverables	3	Quality Assurance Project Plan	NA	11/18/15	11/2015	Approved via email
			Quality Assurance Project Plan, Rev 1	NA	1/15/19		Pending
5	Deliverables	4	Project Management Plan	NA	11/18/15	11/2015	Approved via email
5	Deliverables	5	Health and Safety Plan	NA	11/18/15	11/2015	Approved via email

ATTACHMENT C
SITE FIGURES

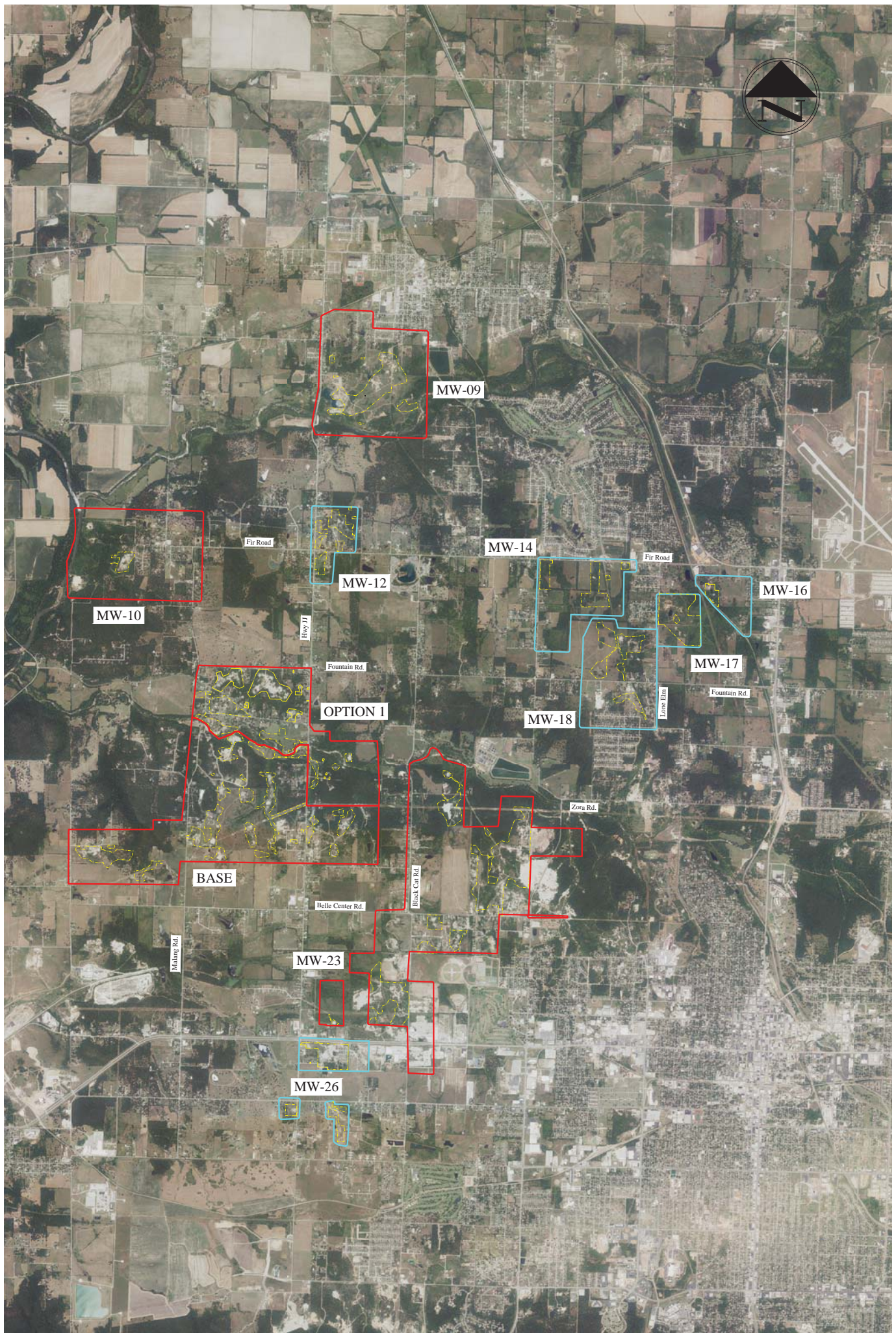


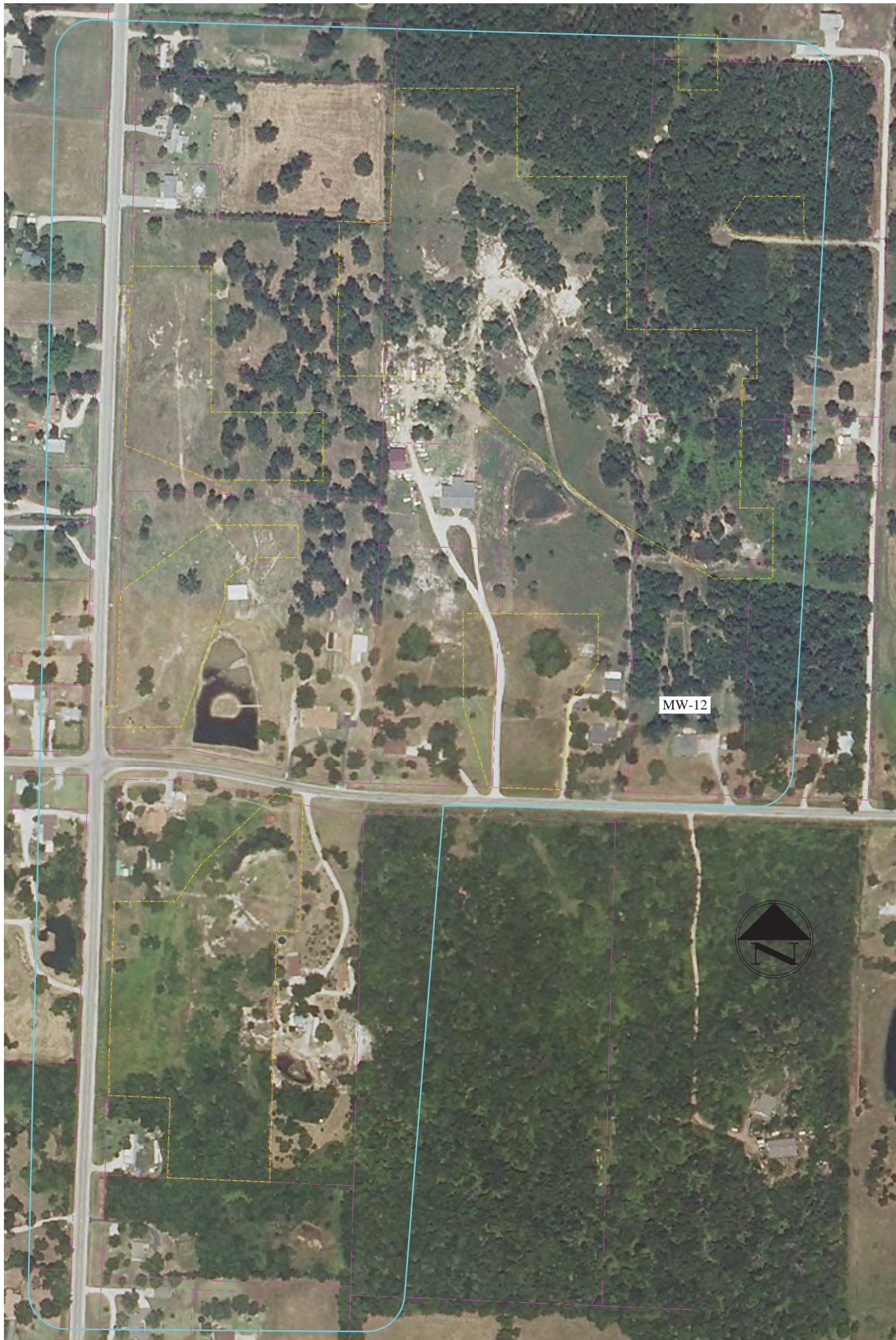




2-8







MW-12





MW-26

MW-26

MW-26





MW-14

MW-16

MW-17

MW-18



ATTACHMENT D
PHOTOGRAPHS



Figure 1 – Cutting North Bench at Gypstack



Figure 2 – Excavation of mine waste at 2-6 North Powerline



Figure 3 – Mine waste removal at MW 19-1